

REMARKS

The Office Action of September 22, 2005, and the references cited therein have been carefully considered.

In this Amendment, the specification has been amended to provide the section headings as required by the Examiner and to correct other noted informalities. Additionally, the claims have been amended to overcome the formal objections and rejections thereto raised by the Examiner, to remove the reference numerals, and to more clearly and specifically define the invention. Additionally, claim 5 has been cancelled.

The Examiner's comments concerning the Information Disclosure Statement filed July 16, 2004, have been noted. However, it is pointed out that the present application is a national stage of a PCT application, which was searched in the European Patent Office, and each of the six references not considered by the Examiner for the reason that no copy thereof was provided, were each cited in the International Search Report for the PCT application, which search report was provided to the Examiner. Moreover, it is pointed out that the IDS presenting the references clearly stated the relationship of the present application to the PCT application, and indicated that this was the reason the references had not been supplied, since it was presumed, that as a result of an existing Treaty, copies of the references found during a search in the European Patent Office were supplied to the United States Patent Office and were already in the file. Moreover, the Information Disclosure Statement stated that if they were not in the file, the Examiner could request a copy of same from undersigned counsel and they would be supplied.

Based on a telephone discussion with the Examiner on September 26, 2005, it was the understanding of undersigned counsel that no copies of the references cited in the International Search Report were in the Examiner's file. Accordingly, a further Information Disclosure Statement is enclosed, which identifies only two of the six cited references, i.e., FR 2 712 230 A and EP 0 707 932 A, since the remaining four references were considered by the Examiner and cited in the last Office Action. Accordingly, consideration of these two references is respectfully requested.

The objection to the drawings for not illustrating all the elements recited in claim 5 has been noted. However, in view of the cancellation of claim 5, this objection is no longer applicable and should be withdrawn.

The objection to the specification under 37 C.F.R. §1.71 as not clearly describing the subject matter of the invention has been noted and is respectfully traversed. It is submitted that the specification, as filed, fully complies with 37 C.F.R. §1.71 and clearly describes the subject matter in a manner so that one skilled in the art could practice the invention. From the Examiner's comments, it initially appears that he is confusing features from two different embodiments of the invention. Initially, it is pointed out that it is only the bottle holder (4) that is kept in the upper position by the force of the spring means (3), as stated in the last paragraph on page 4 and as shown in Figure 1. That is, the heating element and the lid are parts of the housing and consequently are not affected by the spring means. On the other hand, the use of the weight of the lid to do the compacting is directed to the embodiment of Figure 3, wherein the lid (5) is mounted on guide posts (16) for vertical movement, so that when the bottle is heated the weight of the lid (5) moves downward, compressing the bottle takes place using only the weight of the lid. The embodiment of Figure 3 does not contain any spring means, or anything else for biasing the lid in an upward direction. Finally, with regard to the additional compacting mechanism, which is shown in Figure 4, the gear rack (19) and the gear rim (18) have no effect on the normal vertical movement of the lid (5). That is, the gear rack (19), which is fastened to the lid for movement thereof, simply rotates the gear rim (18) during its upward or downward movement. After the downward movement of the lid and compacting due to the lid weight has been completed, the gear rim (18) can be further rotated via the handle (17) to press the lid (5) farther in a downward direction as a result of engagement between the gear rim (18) and the rack (19) fastened to the lid. It is submitted that these explanations, which were likewise briefly discussed with the Examiner in the above-mentioned telephone conversation, clearly indicate that the specification fully complies with 37 C.F.R. §1.71, so that this ground of objection should be withdrawn.

With regard to the form of the specification objected to by the Examiner, the above amendments to the specification add the missing section headings.

Accordingly, this ground of objection has been overcome and likewise should be withdrawn.

Concerning the objections to claim 1 found on the top of page 5 of the Office Action, it is submitted that the above amendments clearly overcome each of the stated objections.

The rejection of all of the claims, i.e., claims 1-14, under 35 U.S.C. §112, first paragraph, for failing to comply with the enablement requirement has been noted and is respectfully traversed. In view of the above discussions with regard to the rejection to the specification under 37 C.F.R. §1.71, it is submitted that this ground of rejection is unwarranted, that the claims fully comply with 35 U.S.C. §112, first paragraph, and should be withdrawn.

Reconsideration of the rejection of claims 1-14 under 35 U.S.C. §112, second paragraph, as being indefinite has been noted. In view of the above amendments to the claims, which correct each of the specific formal objections raised by the Examiner, as well as other informalities, it is submitted that this ground of rejection has now been overcome and should be withdrawn.

Reconsideration of the rejection of claims 1, 3-5 and 13, under 35 U.S.C. §103(a) as being unpatentable over the French reference to Ducruez in view of the U.S. patent to Menzak Jr. is respectfully requested. In urging the ground of rejection, the Examiner has essentially taken the position that the Ducruez reference discloses all of the claimed features recited in claim 1, except for the location of the heating element, which is arranged on the bottom of the bottle and thus not around a neck part of the bottle in its starting position as required by claim 1; that the patent to Menzak Jr. teaches a bottle compactor having a heating element around a neck and a body of the bottle in order to uniformly heat the bottle; and that consequently it would have been obvious to one having ordinary skill in the art to replace the bottom heating arrangement of Ducruez with a heating element around the body and neck of the bottle as taught by Menzak Jr., and thus arrive at Applicant's claimed invention. It is submitted, however, that even if the combination of the Ducruez and Menzak Jr. references as suggested by the Examiner were obvious to one skilled in the art, it would not result in Applicant's invention as now clearly defined in claim 1.

As pointed out by the Examiner, the patent to Menzak Jr. teaches a heating element (24) arranged around a neck and a body of a bottle in order to uniformly heat the bottle. However, this is not the case according to the present invention, where uniform heating of the bottle is not desired. Note that the heating element according to the present invention is at most 60 mm high and is arranged only around the neck portion of the bottle in order to produce this non-uniform heating, which is a basic difference and one of the most important features of the present invention. Note that a plastic bottle will shrink in all directions if evenly heated while being compressed, which does not allow an effective compaction as the heated walls of the bottle cannot be arranged in regular corrugated sections, with the result that the compacted piece is relatively large, as shown for example by the lower compacted bottle in Figure 5. According to the present invention, however, where the heating is carried in thin sections, one after the other, every softened section can be pushed within the wall of the bottle and the previously compacted section. In this way, an optimum compaction as shown for example in the top figure of Figure 5, can be achieved. Accordingly, it is submitted that since there is nothing in any of the references that would make it obvious to one skilled in the art to heat the bottle only in a section at the neck of the bottle, as required by claim 1, it is submitted that claim 1 is allowable over the cited combination of the Ducruez and Menzak Jr. patents.

Claims 3, 4 and 13 are each dependent on claim 1, and therefore are allowable over the cited combination of references for at least the same reasons as are claimed here. However, certain of these claims contain additional features that are not taught or made obvious by the cited combination of references. For example, claim 4, which depends on claim 3, specifically recites that the lid (15), which is mounted for movement on vertical guide bars (16), compresses the bottle towards the base of the housing by its weight. On the other hand, the Ducruez reference does not do any compressing as a result of its weight. Rather, the compressing is carried out simply by the force provided by the drive mechanism (14, 15, 16, 18 and 19) and not by its weight. Thus, it is submitted that claim 4, even as originally presented, is allowable over the cited combination of references. However, in order to more clearly bring out this distinction, claim 4 has been amended to recite that the lid compresses the bottle

“solely” by its weight. Finally, claim 13 has been amended so that it now depends from claim 4 and recites that the additional compacting means provides additional compacting subsequent to the compaction by weight. Clearly, this is not the case according to the Ducruez reference. Accordingly, for the above-stated additional reasons, it is submitted that claims 1, 4 and 13 are allowable over the cited combination of references.

Claims 2, 6-12 and 14, which, as pointed out by the Examiner, were not rejected over the prior art, are each dependent on claim 1 and therefore are allowable over the cited combination of references for at least the same reasons as claim 1. However, it is noted that claim 2 specifically recites that the cross-section of the air channel is adjustable, which is clearly not the case for the base 23 according to the Ducruez patent. Claim 6 has been amended so that it now depends from claim 1 and more specifically defines the embodiment of Figure 1 of the present application, an arrangement that is clearly not taught or rendered obvious by the cited combination of references. Claims 7-10 are all directed to features of the sealable plug, including flow control in the air channel and the adjustability of the diameter of at least one section of the plug, all of which features are not present in the Ducruez reference. Claims 11 and 12 recite that the height of the heating element or the portion of the heating element about the bottle is at most 60 mm, i.e., rather small, and there is no mention of such a short height, or the specific numerical value of this height in the cited reference. Finally, claim 14 is dependent on claim 13 and more specifically defines the additional mechanical compacting means, which likewise is not taught or made obvious by the cited references. Accordingly, it is submitted that each of claims 2, 6-12 and 14 are allowable over the cited combination of references under 35 U.S.C. §103(a).

In view of the above amendments and for the above-stated reasons, it is submitted that all of the pending claims, i.e., claims 1-4 and 6-14, are allowable over the prior art of record and are in condition for allowance. Such action and the passing of this application to issue are respectfully requested.

If the Examiner is of the opinion that the prosecution of the application would be advanced by a personal interview, the Examiner is invited to telephone undersigned counsel to arrange for such an interview.

Respectfully submitted,

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